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V. I. Filyakova

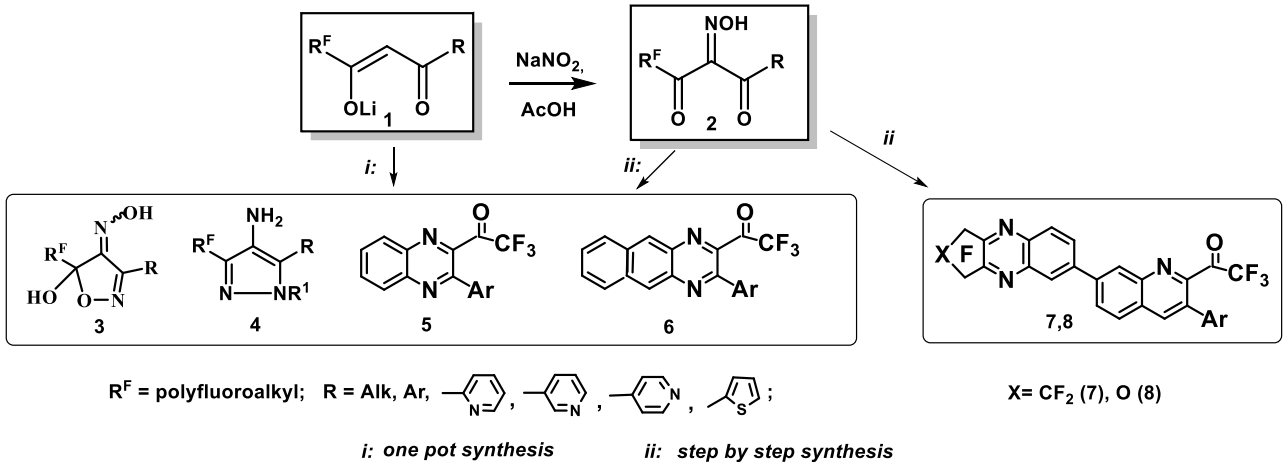
I. Ya. Postovsky Institute of Organic Synthesis,
Ural Branch of the Russian Academy of Sciences,
620108, Russia, Ekaterinburg,
S. Kovalevskoy / Akademicheskaya St., 22 / 20,
vif@ios.uran.ru

LITHIUM 3-POLYFLUOROALKYL-1,3-DIKETONATES AS A VALUABLE BUILDING BLOCKS*

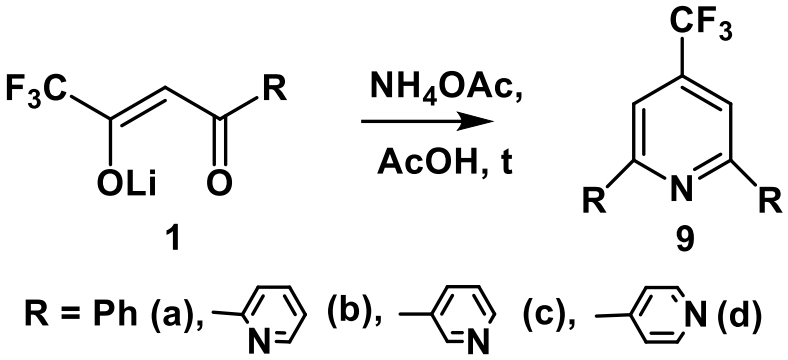
Key words: Lithium 3-polyfluoroalkyl-1,3-diketonates, 4-amino-pyrazoles, quinoxaline and pyridine derivatives, terpyridine.

Previously, we have introduced lithium 3-polyfluoroalkyl-1,3-diketonates (LDKs) in organic synthesis as building blocks and demonstrated benefits of their use compared to appropriate 1,3-diketones. They are readily accessible, stable on storage, and highly reactive. On the bases on LDKs, we have developed facile syntheses methods of fluoroalkyl-containing polyfunctional compounds [1–8], various linear and annulated heterocycles [1, 9–14].

We have significantly expanded the synthetic capabilities of LDKs **1** through nitrosation reactions and developed effective methods for the synthesis of 5-hydroxy-5-(polyfluoroalkyl)isoxazol-4(5*H*)-one oximes **3** [14], 4-amino-pyrazoles **4**, quinoxaline derivatives **5** and **6** [14] and new heterocyclic systems **7** and **8**.



In addition, when LDKs were reacted with ammonium acetate in AcOH, pyridine derivatives **9** were unexpectedly obtained. Of particular importance is the process of converting LDK **1b** to terpyridine **9b**, which is an effective ligand for the design supramolecular systems, creating organic chemosensors, photosensitizers, etc.



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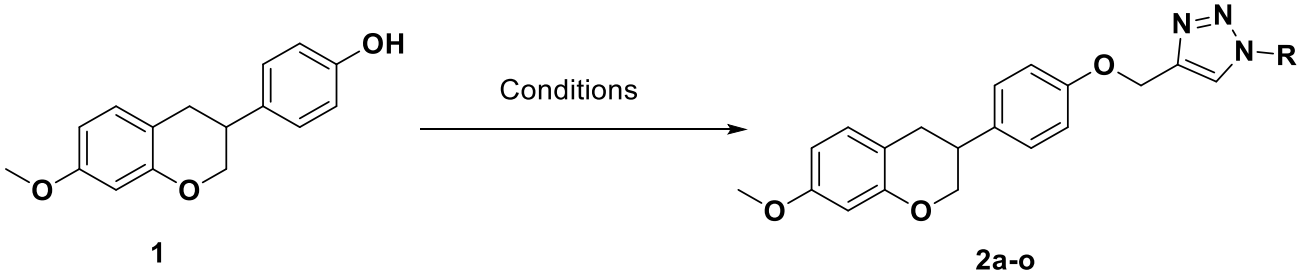
M. N. Joy, N. A. Beliaev,
T. V. Beryozkina, V. A. Bakulev

TOS Department, Ural Federal University,
620002, Russia, Yekaterinburg, Mira St., 19,
v.bakulev@urfu.ru; mnibinjoy@urfu.ru

FACILE ONE-POT SYNTHESIS OF PHARMACOLOGICALLY RELEVANT 1,2,3-TRIAZOLES LINKED TO EQUOL*

Keywords: equol, cycloaddition, 1,2,3-triazole, copper.

A convenient access for the synthesis of some pharmacologically relevant equol derivatives linked to 1,2,3-triazoles has been achieved [1]. The salient features of this developed protocol include: easy isolation process, good to excellent yield of the products and appendage diversity of heteroaryl triazoles (scheme).



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